

# SERVO VELOCITY SEISMOMETER VSE-355G3

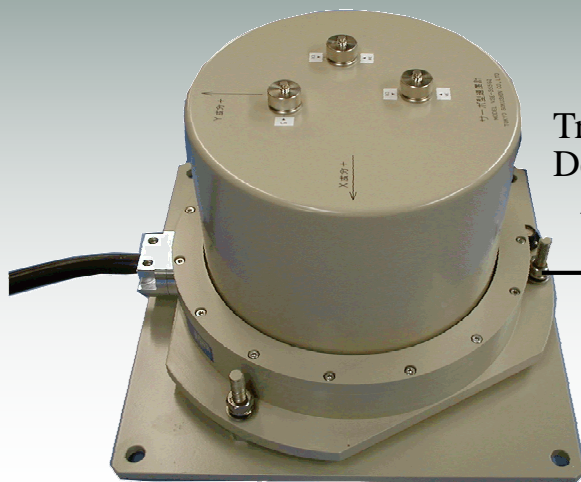
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## BROADBAND

Strong Motion  
~ Micro Earthquake

2m/s & 20m/s<sup>2</sup> (2000Gal) Maximum  
146dB Dynamic Range  
0.008Hz to 70Hz



Tri-axial & Water proof  
Detector

VSE-355G3

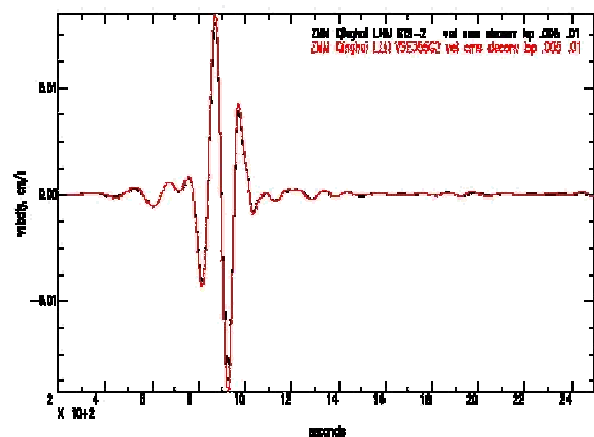
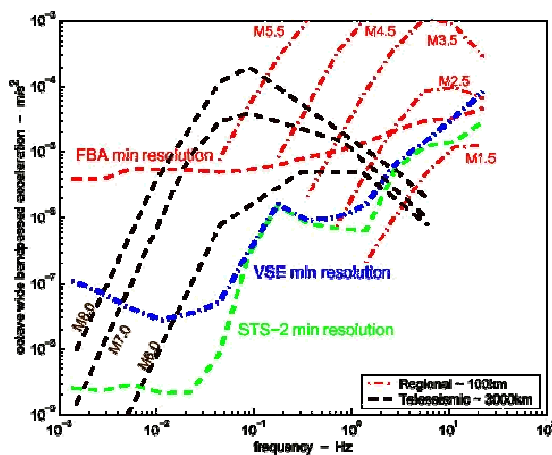
Power unit  
Built-in  
back-up battery  
PF-610



### Comparison with STS-2

The model VSE seismometer is designed for strong motion earthquakes. This clip level is 142times as large and a frequency range is 7times as wide as the model STS-2.

	STS-2	VSE-355G3
Clip level	0.014m/s	2m/s
Frequency range	0.008 to 10Hz	0.008 to 70Hz
Dynamic range	146dB	146dB



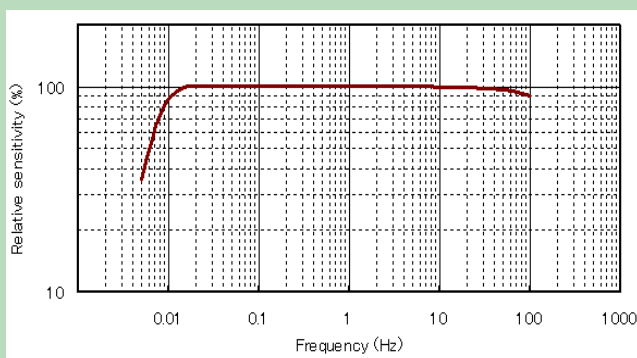
- The data are extracted from "Performance of the VSE-355G2 Strong Motion Velocity Seismometer- Report to the IRIS-GSN Sub-Committee". Clinton, J.F. and Heaton, T.H., Caltech, 2002"
- VSE-355G3 is revised model of VSE-355G2.

# Specifications

## Servo Velocity Seismometer VSE-355G3

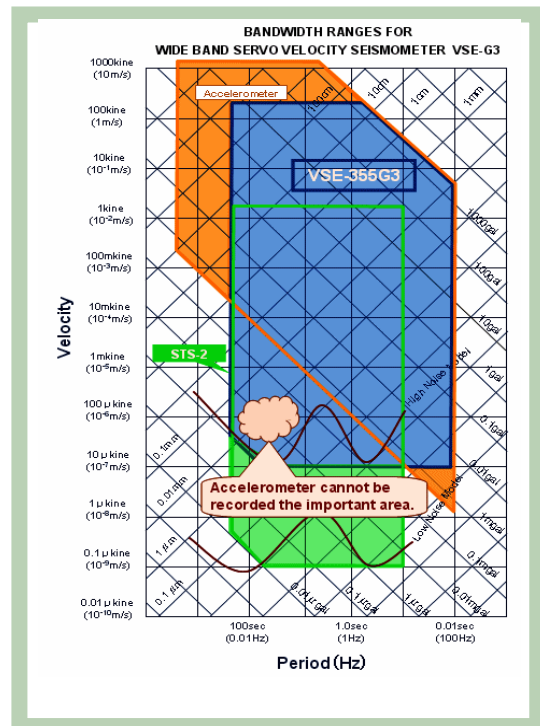
Mode of operation	Tri-axial	Cross axis sensitivity	0.5%
Frequency range	0.008 to 70Hz	Sensitivity of Temperature coefficient	0.01%/°C
Max. measuring range	±2m/s, 20m/s <sup>2</sup> (±2000Gal)	Temperature coefficient of zero-shift	0.05%/°C
Sensitivity	5V/m/s × 2	Power requirements	±15VDC
Max. Output voltage	±20V(Balanced output)	Current consumption	150mA
Tilt Output	5.13V/0.1degree	Arrester	Voltage 30V, Current 5kV, 100A
Resolution	10 <sup>-8</sup> m/s <sup>2</sup> (10 <sup>-6</sup> Gal)	Temperature range	-10°C to 50°C
Dynamic range	146dB	Allowable shock	30G (less than 0.1sec)
Calibration coil	15μA/Gal, 1000Ω	Dimension	330 × 330 × 243.1 mm
Linearity	Less than 0.03%	Enclosure	Waterproof 1kg/cm <sup>2</sup>

### Frequency response



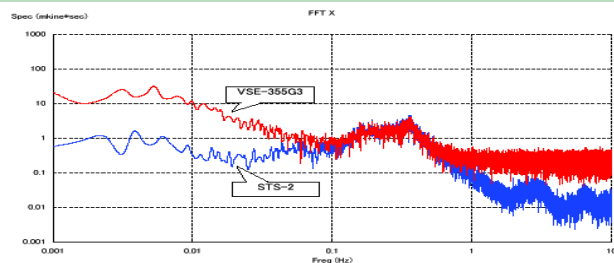
### Recording Range

VSE-355G3 can record the important seismic signals shown by blue area.



### Comparison of Noise Specter

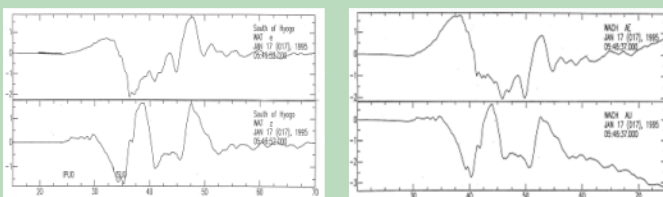
The clip level of VSE is larger than STS-2. Therefore the noise level of VSE is larger than STS-2.



### Calculated Ground Displacement

It is generally observed the abnormal results in calculated displacement from the accelerometers however normal results are observed from the velocity.

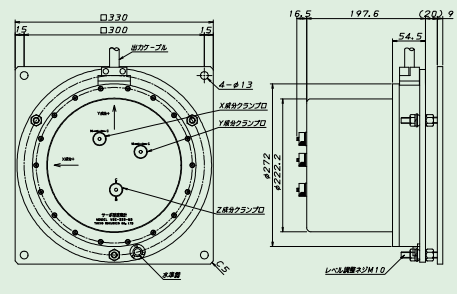
(Actual result at 1995.1.17 Hanshin-Awaji Strong motion earthquake)



From the velocity (VSE)

From the accelerometer

### Dimension



The specification may change without notification because of the proved product.